

FILE NOTE:

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REVIEW BY JACQUELINE  
JENNINGS (FOIA COORDINATOR)  
AS OF 03/11/99



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street  
San Francisco, Ca. 94105

**MEMORANDUM**

DATE: June 28, 1991

SUBJECT: Preliminary Assessment Review

Facility: C & M Plating Works PA date: August 31, 1990

FROM: Josephine Chien Kelly

TO: Karen Schwinn  
Chief, Waste Compliance Branch

THROUGH: Nancy Lindsay, Chief, Corrective Action Section

Jim Breitlow, Chief, Permits Section

Larry Bowerman, Chief, Alternative Technology Section

**I. FACILITY DESCRIPTION**

Facility Name: C & M Plating Works

Address: 598 Sixth Street  
San Francisco, California

EPA ID Number: CAD009204736

DoHS Region (if CA): 2

RWQCB Region (if CA): 2

I. FACILITY DESCRIPTION (cont.)

Brief Description of Facility Operations and Hazardous Waste Management:

C & M Plating Works is a permitted electroplating facility located in a commercial/industrial area. The metals used in the plating process include copper, brass, tin, zinc, chromium, nickel, lead, gold, and silver. Wastewaters generated from the process are pre-treated before being discharged to the local publicly owned treatment works. The pre-treatment processes include a cyanide destruction system, which utilizes chlorine and sodium hydroxide, a chromium separation system, which utilizes sodium metabisulfite, lime, and a flocculent, and a pH adjustment system. Hazardous waste sludges, residues, and spent plating solutions containing cyanides and metals, and spent halogenated and nonhalogenated solvents produced by the facility are stored onsite in the hazardous waste storage area for less than 90 days before it is removed for offsite disposal. C & M had stopped storing hazardous wastes onsite for longer than 90 days in June, 1987. The facility is currently closing its hazardous waste storage area so that it can achieve regulatory status as a hazardous waste generator only.

General Description of Solid Waste Management Units (SWMUs), if known (indicate RCRA-regulated units with asterisk):

- Unit 1 - Cyanide Destruction System (Main Building)  
Unit consists of two chambers contained within a polypropylene tank which is in a secondary containment area made of cement blocks coated with epoxy tar sealer.
- Unit 2 - Chromium Separation System (Main Building)  
Unit consists of a three-tank, self-contained system. There is no secondary containment.
- Unit 3 - pH Adjustment System (Main Building)  
There is no secondary containment.
- Unit 4 - Hazardous Materials Storage Area (Main Building)
- \* Unit 5 - Hazardous Waste Storage Area  
Storage yard outside main building is paved and fenced. 55-gallon drums containing hazardous waste are stored on wooden slats in an area bermed with concrete. Four 1300-gallon tanks and one 470-gallon tanks in this area were used to store spent acid solutions until 1984 and 1987, respectively. They are currently empty and await removal.

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II. **ENVIRONMENTAL SIGNIFICANCE** (based on review of PA and discussions with FIT contractor)

A. Preliminary HRS Range (obtain from FIT; indicate if unknown):

12.51

Discussion of FIT Recommendations:

No further action under CERCLA.

B. Hazardous Waste Exposure Information

Instructions: Check all applicable. Circle letter indicating evidence of release as appropriate: D - documented evidence (e.g. analytical data), V - visual evidence (e.g. observed spills, stained soils, etc.), P - potential for release (e.g. past waste management practices suggest probable releases, known soil contamination has probably caused groundwater contamination. etc.). Specify documentation, who saw visual evidence, and/or rationale for potential release, if known.

\_\_\_\_\_ Imminent danger to public health/environment. Immediate action required; explain:

  X   Release to soil.      D          V        P

Analyses of soil samples taken from the hazardous waste storage yard in July, 1989 as part of the closure requirements indicated lead levels up to 15,000 mg/kg total lead (TTLC = 1,000 mg/kg) and up to 440 mg/l soluble lead (STLC 5 mg/l). Background lead levels were 11,000 mg/kg, a level comparable to that obtained in the test samples. More recent follow-up sampling has indicated that the lead contamination is "widespread and general throughout the locality". (DHS has not yet completed review of the sampling data.)

The facility has no record of any spills, uncontrolled releases, or known hazardous waste disposal at the site. The high lead levels are thought to be the result of a release by a previous owner of the site (County Assessor's office has no records of previous owners of the site) or possible lead deposition from old industrial activities, or inherent to the soil used as bay fill material when the area was built.

~~\_\_\_\_\_~~

B. Hazardous Waste Exposure Information (cont.)

  X   Release to groundwater.   D       V       (P)

There is a moderate potential for heavy metal contamination detected in onsite soils to reach groundwater. The groundwater is not currently used for drinking water, and is not anticipated to be in the future.

Release to surface water.	D	V	P
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Release to air.    D            V            P

\_\_\_\_\_ High Potential for Migration (media: \_\_\_\_\_)

\_\_\_\_\_ Sensitive environmental receptors (endangered species, estuaries, etc.) Explain;

No releases

**II. ENVIRONMENTAL SIGNIFICANCE (cont.)**

Extent of Site Characterization (check one):

\_\_\_\_\_minimal        X  extensive      \_\_\_\_\_unknown

Exposure Considerations:

\_\_\_\_\_ Drinking water source at risk: surface or GW

Depth to GW   8   ft bgs GW flow direction: \_\_\_\_\_

GW flow gradient (if known \_\_\_\_\_)

Direction/Distance to nearby wells \_\_\_\_\_

\_\_\_\_\_ Fishing, recreation water source at risk

\_\_\_\_\_ Irrigation, livestock water source at risk

\_\_\_\_\_ Blowing dust;                      \_\_\_\_\_ Poor Site Security;  
nearby population                      nearby population

\_\_\_\_\_ Target Population < 4 miles (#, if known                      )

Exposure pathway(s) \_\_\_\_\_

**C. Constituent Release Information**

Released Hazardous Constituents of Concern and concentrations(see 40 CFR Section 261 Appendix VIII and Section 264 Appendix IX):

Lead

Released Hazardous Wastes of Concern (listed/characteristic):

Lead

Volume of Waste Released (if known):

Volume and source of waste unknown.

Toxicity of Waste (if available from HRS package):

Not indicated

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## II. ENVIRONMENTAL SIGNIFICANCE (cont.)

Additional considerations related to environmental significance:

### III. SITE ENVIRONMENTAL PRIORITY

Instructions: Assign priority based on technical considerations only. Final priority should be briefly explained in terms of potential exposure to human health and the environment based on the technical considerations in Section II.

\_\_\_\_\_ High Priority

\* Known or suspected release which has resulted in, or which has high potential for, exposure to human population and/or sensitive environments, in the short term ( < 10 years).

\* Rough Guideline: Preliminary worst case HRS score > 25

\_\_\_\_\_ Medium Priority

\* Known or Suspected release with potential for exposure to human health or sensitive environments in the long term ( > 10 years).

\* Rough Guideline: Preliminary worst case HRS score between 16 and 25

  X   Low Priority

\* Known or suspected release, but unlikely adverse effect on human health or the environment.

\* Rough Guideline: Preliminary worst case HRS Score between 5 and 15

\_\_\_\_\_ No Further Action

\* No evidence of a release that could adversely affect human health or the environment.

### III. SITE ENVIRONMENTAL PRIORITY (cont.)

#### Comments/Rationale:

The groundwater beneath the facility which can potentially become contaminated with lead in the soil is not currently used, and is not anticipated to be used in the future as a source for drinking water.

Low potential for onsite and offsite exposure to the soil contaminants and release of soil contaminants to air because the soil is covered with pavement.

Facility is located in a commercial/industrial area.

### IV. RCRA PERMITTING STATUS

#### A. Contact Person(s):

	Name	Date Contacted	Phone	Agency
1.	Dennis Geiser	6/26/91	415/744-2069	EPA-Permits
2.	Sonia Low	6/19/91	415/540-2122	State-Permits
3.	None			RWQCB (CA only)

#### B. Current Status (mark all applicable):

Instructions: For source, indicate file document or numeral for contact person listed above.

☒ Operating RCRA TSDF; Source: DHS

☐ Not Operating RCRA TSDF; Source:

☐ Bankrupt Facility; Source:

☐ Non-Notifying TSDF - should be a RCRA TSDF but didn't submit a Part A permit application  
Source:

☐ Generator only - never operated as a TSDF  
Source:

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IV. RCRA PERMITTING STATUS (cont.)

B. Current Status (cont.)

  X   Permitted TSDF or Seeking Permit;

Source: DHS

Date Permitted:   9/30/83   Agency:   DHS  

Part B Permit Application Submitted?   Y   N

Permit Application Review Lead (circle)  
EPA   STATE   OTHER (specify)

Corrective Action in (draft) Permit? Y   N  

Expected Permit Issuance Date:

Permit Expiration Date: 8/30/88

Permit Renewal Application Submitted Y   N  

(Expected) Renewed Permit Issuance Date:

Renewed Permit Expiration Date:

  X   Closed or Closing Facility; Source: DHS

Closure Plan Submittal (Expected) Date: 5/88

Closure Plan Review Lead (circle all applicable):  
EPA   STATE   OTHER (specify)

Closure Plan Approved?   Y   N Date: 4/89

Closure Certification Received? Y   N  

Clean Closed? Y   N  

Closure Certification accepted by EPA/DoHS? Y N

       Post-Closure permit; Source:

Post-Closure Permit Application Submitted?  
Y N

Post-Closure Permit Application Review Lead  
EPA STATE Other (specify)

IV. RCRA PERMITTING STATUS (cont.)

B. Current Status (cont.)

Corrective Action in (draft) Permit Y N NA

(Expected) Post-Closure Permit Issuance Date:

\_\_\_\_\_ Combination: some units closing, some seeking  
permit (i.e. partial closure). Source:  
Explain:

\_\_\_\_\_ Part A Withdrawal Candidate; Source:  
Explain:

\_\_\_\_\_ RWQCB Waste Discharge Requirements requiring  
investigation and/or remediation in Effect (CA only)

Other Comments:

Facility is in the process of closing their hazardous waste storage area, the only RCRA-regulated unit onsite. Facility intends to continue operation as a RCRA hazardous waste generator.

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V. OTHER REGULATORY ACTIVITIES RELEVANT TO CORRECTIVE ACTION

A. Contact Person(s):

	Name	Date Contacted	Phone	Agency
6.	None			EPA-Enforcement (RCRA)
7.	None			EPA-CERCLA
8.	Bill Brown	7/2/90	415/540-2122	State-Enforcement
9.	None			State-Superfund
10.	None			RWQCB

B. Activity

Instructions: mark all applicable; note any pertinent outstanding violations.

\_\_\_\_\_ EPA Enforcement Action with Activities Relevant to  
Corrective Action; Source:  
Date:

Explain:

\_\_\_\_\_ State Enforcement Action with Activities Relevant  
to Corrective Action; Source:  
Date:  
Explain:

\_\_\_\_\_ Regional Water Board Order or WDR Requiring  
Corrective Action (CA only); Source:  
Date:  
Explain:

\_\_\_\_\_ Other Agency Enforcement Action with Activities  
Relevant to Corrective Action; Source:  
Date:

Explain:

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VI. OVERALL STATE LEVEL OF INVOLVEMENT IN CORRECTIVE ACTION

(based on state actions, level of state staff person's oversight)

Mark one:

☒ High      ☐ Medium      ☐ Low

Rationale:

DHS has lead in oversight of facility closure and mitigation of lead contamination.

VII. FACILITY WILLINGNESS/ABILITY TO PERFORM CORRECTIVE ACTION

☒ Facility is cooperative

☐ Facility is uncooperative; Explain:

☐ Unknown

☐ Facility may be financially unable to complete work.  
Explain:

Other Comments:

Facility has stated that their investigations have indicated that the lead contamination is widespread in the area and predates C & M Plating Works' existence. The facility feels that the existing contamination does not impact any local drinking water sources and presents no danger of doing so in the future. Therefore, C & M Plating Works has requested that the site investigation be concluded, and their hazardous waste storage facility be closed without further remediation.

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VIII. RECOMMENDATION FOR FURTHER ACTION (mark all applicable)

Instructions: Consider factors in Sections I - VII to arrive at final recommendation for further action.

\_\_\_\_\_ Imminent and substantial danger to human health or the environment requires issuance of RCRA 7003 Order and/or CERCLA 106 Order.

\_\_\_\_\_ Issue RCRA 3013 order. Release of hazardous waste presents a substantial hazard to human health or the environment (investigation only).

\_\_\_\_\_ Refer to CERCLA for further follow-up.

\_\_\_\_\_ Facility unwilling or unable to perform corrective action (explain in Section VII)

\_\_\_\_\_ Other (e.g. mining waste, active superfund site, generator only, etc.)  
Specify:

  X   No further CERCLA action

\_\_\_\_\_ Conduct an RFA

\_\_\_\_\_ as prelude to expected corrective action order

\_\_\_\_\_ as prelude to permit issuance

\_\_\_\_\_ Use a 3007 letter to obtain more information regarding the following items (a subsequent recommendation must be made after the information is received):

\_\_\_\_\_ Negotiate 3008(h) Consent Order

- Must have documented or probable release of hazardous wastes or constituents
- Must be a RCRA TSDF that has interim status (i.e. not yet permitted, including illegal TSDF that should have had interim status.
- For California, must not have a permit issued by DoHS between 1/13/83 and 11/8/84. Permits issued by DoHS between 11/9/84 and 1/31/86 are considered partial RCRA-equivalent permits; with respect to corrective action, facilities permitted between 11/9/84 and 1/31/86 have interim status.

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VIII. RECOMMENDATION FOR FURTHER ACTION (cont.)  
(mark all applicable)

- \_\_\_\_\_ Incorporate corrective action into post-closure permit through 3004(u) and (v).
- \_\_\_\_\_ Incorporate corrective action into permit through 3004(u) and (v).
- \_\_\_\_\_ Include corrective action in closure plan (appropriate only for surface soil releases near regulated units)
- Action 1*   X   Ongoing or planned State action is sufficient to address release(s). Defer to state or other agency lead (identify):

Defer to DHS.

DHS has lead on facility closure and oversight on mitigation of lead contamination.

*Action 2*   X   No further RCRA action at present; re-evaluate next year.

*Action 3* \_\_\_\_\_ No further RCRA action.

  X   other (specify): *see memo field*

Comments:

There is potentially widespread lead contamination in the area. Soil samples taken in 1989 indicate that background lead levels (11,000 mg/kg) are comparable to test sample levels (up to 15,000 mg/kg). DHS is currently reviewing the results from the facility's most recent sampling effort and will determine the facility's closure requirements. EPA has recommended that action be deferred to DHS. However, EPA should reevaluate the facility's status next year. If the lead contamination is indeed widespread in the area, it may be necessary to refer the facility to CERCLA (since facility lost interim status at time of permitting).

VIII. RECOMMENDATION FOR FURTHER ACTION (cont.)

✓ Recommendation Accepted

Karen Schwinn 7/15/91  
Karen Schwinn  
Chief  
Waste Compliance Branch

When applicable, entity to perform RFA:

\_\_\_\_\_ State  
\_\_\_\_\_ FIT (CERCLA)  
\_\_\_\_\_ contractor (RCRA)  
\_\_\_\_\_ Other; specify:

Rachel Loftin  
cc: ~~Virginia Cummings~~, EPI Superfund Liaison, H-8-1  
Jesse Baskir, EPI Coordinator, H-4-4  
Jim Breitlow, Permits, H-3-2 (when appropriate)

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\*\*\*\*\* PREDECISIONAL DOCUMENT \*\*\*\*\*

SUMMARY SCORESHEET FOR COMPUTING  
PROJECTED PROPOSED REVISED HRS SCORE

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SITE NAME: C&H Plating Works  
CITY, COUNTY: San Francisco, San Francisco County  
EPA ID #: CAD009204736 Lat/Long: \_\_\_\_\_  
PROGRAM ACCOUNT #: FCA1460RAA T/R/S: T  
EVALUATOR: Kimberly Hall DATE: 7/11/90  
THIS SCORESHEET IS FOR A: PA \_\_\_\_\_ SSI \_\_\_\_\_ LSI \_\_\_\_\_  
SIRe \_\_\_\_\_ PA Redo \_\_\_\_\_ Other (Specify) RCRA PA

RCRA STATUS (check all that apply):

\_\_\_\_ Generator ☒ Small Quantit. generator \_\_\_\_\_ TSD \_\_\_\_\_ TSDF \_\_\_\_\_

\_\_\_\_ Not Listed in RCRA Database as of (date of print) \_\_\_\_\_

STATE SUPERFUND STATUS:

\_\_\_\_ BEP (date) \_\_\_\_ / \_\_\_\_ / \_\_\_\_ WQARF (date) \_\_\_\_ / \_\_\_\_ / \_\_\_\_

	S pathway	S <sup>2</sup> pathway
Air Migration Pathway Score (S <sub>a</sub> )	13.87	192.38
Groundwater Migration Pathway Score (S <sub>gw</sub> )		*
Surface Water Migration Pathway Score (S <sub>sw</sub> )	20.83	433.89
On-site Exposure Pathway Score (S <sub>os</sub> )	0	0
$S_a^2 + S_{gw}^2 + S_{sw}^2 + S_{os}^2$		626.27
$(S_a^2 - S_{gw}^2 + S_{sw}^2 + S_{os}^2)/4$		156.57
$\sqrt{(S_a^2 + S_{gw}^2 + S_{sw}^2 + S_{os}^2)/4}$		12.51

\*Pathways not evaluated (explain): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# ecology and environment, inc.

160 SPEAR STREET, SAN FRANCISCO, CALIFORNIA 94105, TEL. 415/777-2811

International Specialists in the Environment

## ENVIRONMENTAL PRIORITIES INITIATIVE PRELIMINARY ASSESSMENT

Purpose: RCRA Preliminary Assessment

Site: C & M Plating Works  
598 Sixth Street  
San Francisco, California  
San Francisco County

Site EPA ID Number: CAD009204736

TDD Number: F9-9004-012

Program Account Number: FCA1460RAA

FIT Investigators: Kimberly Hall  
Karen Johnson

Date of Inspection: July 12, 1990

Report Prepared By: Kimberly Hall *KH*

Through: Tara Abbott *TLB*

Report Date: August 31, 1990

FIT Review/Concurrence:

*James M. James* 8/27/90

Submitted To: Ginny Cummings, Site Assessment Manager,  
EPA Region IX

## **1. INTRODUCTION**

As part of the U.S. Environmental Protection Agency's (EPA) Environmental Priorities Initiative (EPI) program, EPA has requested Ecology and Environment, Inc.'s Field Investigation Team (E & E FIT) to conduct a Preliminary Assessment (PA) of C & M Plating Works, located at 598 Sixth Street in San Francisco, California.

The EPI program integrates the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) in order to set priorities for cleanup of the most environmentally significant sites first. The Preliminary Assessment uses CERCLA proposed revised Hazard Ranking System (rHRS) criteria to determine the site's eligibility for the National Priorities List and, thus, to prioritize facilities for the RCRA program.

## **2. SITE DESCRIPTION**

### **2.1 SITE LOCATION AND OWNER/OPERATOR HISTORY**

C & M Plating Works (C&M) operates at 598 Sixth Street in San Francisco, San Francisco County, California. The site is located in Township 2 South, Range 5 West, Mount Diablo Base Line and Meridian (Latitude: 37° 46' 28", Longitude: 122° 23' 59") (see Figure 1: Site Location Map) (1). C&M has operated a plating shop at this site since 1959. The site, located in a commercial/industrial area, currently consists of a hazardous waste accumulation yard which is surrounded on three sides by two buildings. The main brick building, on the north and east sides of the waste accumulation yard, was built in 1920 and was used prior to C&M as a laundry and warehouse. The metal building on the southwest side of the waste accumulation yard was erected by C&M in 1959 (see Figure 2: Facility Map) (2,3).

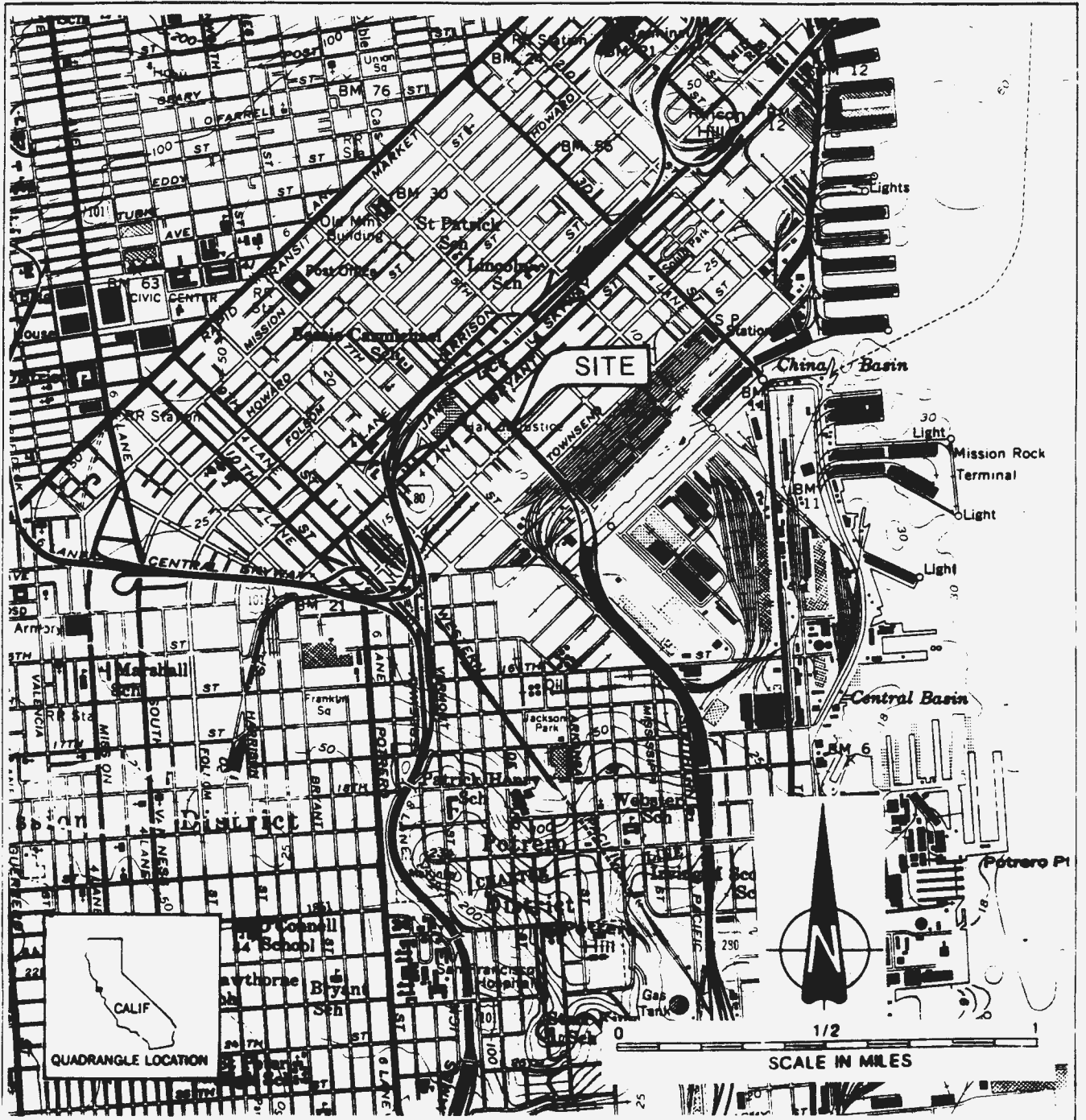
The area where the hazardous waste accumulation area is currently located was unused until approximately 1982 when C&M had it paved, sealed, and bermed for hazardous waste storage (2).

### **2.2 FACILITY PROCESSES/WASTE MANAGEMENT**

#### **2.2.1 HISTORICAL**

Since 1959 C&M has operated as a plating facility for the electroplating of metal finishes on various surfaces. The metals used in this process include copper, brass, tin, zinc, chromium, nickel, lead, gold, and silver (4). In 1982 an on-site hazardous waste storage area was constructed for storage of hazardous wastes, including cyanides, metals, and spent acid solutions. Prior to 1982 all waste was discharged directly to the publicly owned treatment works (POTW) after undergoing only pH treatment (2,3). In 1980, C&M installed a new pH treatment system and in 1984 the company

SOURCE: Base from San Francisco North Quadrangle



ecology and environment, inc.

Figure 1: SITE LOCATION MAP  
C & M PLATING WORKS  
598 SIXTH STREET  
SAN FRANCISCO, CA  
SAN FRANCISCO COUNTY

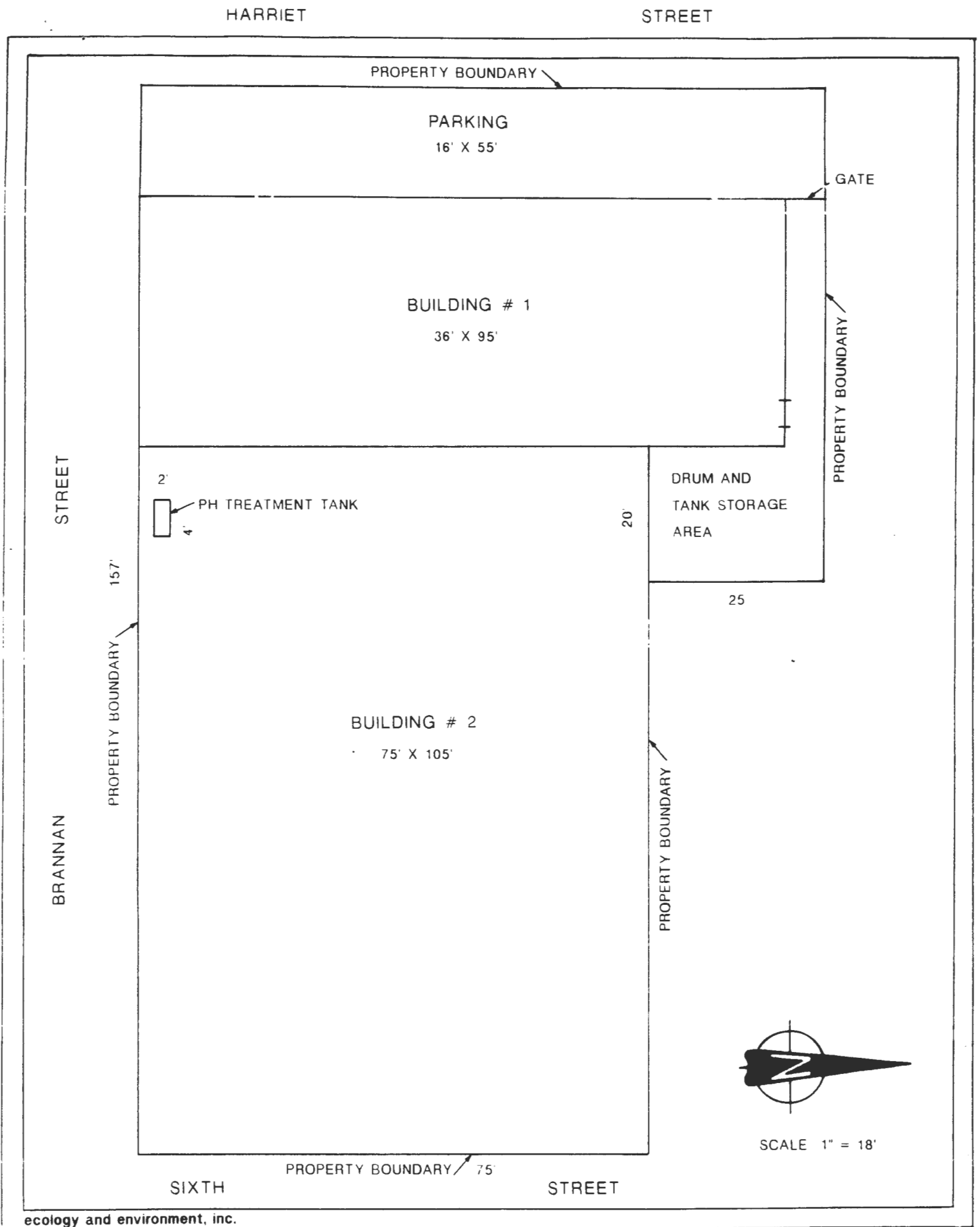


Figure 2: FACILITY MAP  
C & M PLATING WORKS  
598 SIXTH STREET  
SAN FRANCISCO, CA SAN FRANCISCO COUNTY

installed two additional pre-treatment systems designed to treat wastewater generated from on-site operations. These systems consisted of a cyanide destruction system and a chromium separation system (6). In 1987, C&M installed a chrome-containing spent acid treatment system along with an associated filter press to reduce the volume of sludge produced from the system. After pre-treatment, all wastewater was still routed through the pH treatment system before discharge to the local POTW. These systems, as well as the storage areas for acids, metals, oxidizers, and caustics, are located within the main building (2,5).

C&M stopped storing hazardous waste on-site for longer than 90 days in June 1987. The original waste storage area is now termed the waste "accumulation" area (3).

#### 2.2.2 CURRENT

C&M's metal plating operations have not changed since the company began operations at the site in 1959. However, cadmium is no longer used for plating purposes due to its highly toxic nature. C&M is currently using the cyanide destruction, chromium separation, and pH treatment systems. However, C&M terminated use of the chrome-containing spent acid treatment system and the associated filter press in 1988. Hazardous wastes, including cyanides, metals, and spent acid solutions, are stored on site in the hazardous waste accumulation area for less than 90 days before removal off site (2,6).

### 3. APPARENT PROBLEM

C&M is in the process of changing the facility's Hazardous Waste Facility permit status from a "hazardous waste storage facility" to a "hazardous waste generator". When the permit was first issued, wastes were stored on site for more than 90 days. However, this practice was deemed economically inefficient and, thus, wastes are currently stored on site for less than 90 days (2).

As part of the closure procedures, the California Department of Health Services (DHS) required that soil samples be taken from the former hazardous waste storage yard (currently termed the "hazardous waste accumulation yard"). Analyses of soil samples collected in July 1989 indicated the presence of up to 15,000 milligrams per kilogram (mg/kg) total lead (TTLC 1,000 mg/kg) and up to 440 mg/l (milligrams per liter) soluble lead (STLC 5 mg/l) in soils beneath the storage area. Lead was also detected in the background sample at a level of 11,000 mg/kg. Soluble copper exceeded the STLC of 25 mg/l in one soil sample (36 mg/l) (10). No volatile organic compounds were detected in any of the soil samples.

C&M has never used lead in the facility's plating operation; therefore, it is not likely that lead contamination is a result of C&M's waste storage practices. As the C&M facility is built upon bay fill material, lead contamination may be inherent in the soil that was introduced to the area. A consultants report documents the

previous operation of a battery reclamation facility at the site as a potential source for the lead contamination (3). However, this report is inaccurate as the current owner recalls a used equipment business at the site. The former operation was concerned primarily with buying and selling used equipment which they would clean and recondition. However, as a side business, the company may have broken up old batteries to recycle the lead (2). The San Francisco County Assessor's office does not have any records of previous owners of the site (19). DHS is requiring further sampling to determine the lateral extent of lead contamination and to isolate the potential source (3,6).

C&M appears to have adequate containment to prevent releases of hazardous materials or wastes from current facility processes (2).

#### 4. REGULATORY INVOLVEMENT

C&M filed a Hazardous Waste Permit Application on November 12, 1980. The facility operated under an Interim Status Document dated March 30, 1981 until the final Hazardous Waste Facility Permit was issued by DHS on September 30, 1983. This permit expired on September 30, 1988 (4,6).

C&M submitted a variance application to DHS on April 10, 1986 for the cyanide destruction, chrome separation, and pH adjustment pre-treatment systems. The facility submitted a variance application amendment to DHS on October 13, 1987 for a chrome-containing, spent acid treatment process (6).

During an inspection conducted March 24, 1988, DHS noted that C&M was treating hazardous waste without a permit, even though the facility had filed a variance application for these processes (7). C&M is no longer using the chrome-containing acid treatment system as the variance for this system was denied. The reason for the variance denial is uncertain. However, the facility still utilizes the cyanide destruction, chrome separation, and pH adjustment systems. It is the facility's understanding that these systems will be automatically permitted (non-RCRA) when the Permit by Rule decision is passed (2,20).

As stated in Section 3, C&M is in the process of changing the facility's RCRA permit status. DHS is overseeing the sampling that is being conducted as part of the hazardous waste storage facility closure process (2,3).

The San Francisco Department of Public Works issued Order #105015 to C&M in May 1976; the order allows the facility to discharge to the city's sewer system. In addition, the San Francisco Department of Public Health issued a permit dated January 8, 1988 which allows the facility to store hazardous materials (7,8,9).

C&M is not part of the California Bond Expenditure Plan as of January 10, 1990 (21).

## 5. HRS FACTORS

The Hazard Ranking System (HRS) is a scoring system used to assess the relative threat associated with actual or potential releases of hazardous substances from sites. It is the principal mechanism EPA uses to place sites on the National Priorities List (NPL). EPA has proposed revisions to the HRS, pursuant to the Superfund Amendments and Reauthorization Act of 1986 (SARA). FIT has evaluated the following proposed revised HRS factors with respect to this site.

### 5.1 WASTE TYPE/QUANTITY

Wastewater generated from on-site plating processes is pre-treated before being discharged to the POTW. These processes include a cyanide destruction system, a chromium separation system, and a pH treatment system (5).

The cyanide destruction system is a two-staged process consisting of two chambers contained within a skid mounted polypropylene tank. Cyanide is destroyed using sodium hydroxide to maintain pH and chlorine as an oxidizing agent. The entire unit is in a secondary containment area consisting of cement blocks coated with epoxy tar sealer. Cyanide wastewater is separated from the mainstream wastewater and routed to the system at a rate of approximately 2,000 gallons per day (gpd). The unit has a treatment capability of approximately 9,000 gpd (5).

The chromium separation process consists of a three-tank, self-contained system with a total capacity of 50 gallons. Wastewater containing chromium is collected and undergoes treatment with sodium meta bisulfite, lime, and a flocculent. The resulting chromium-containing precipitate is collected in polypropylene bags and temporarily stored in 55-gallon drums before removal to a Class 1 disposal facility. This system has no secondary containment (5).

All pre-treated wastewater is mixed with the plant's mainstream process water and routed to a pH adjustment system. Approximately 6,500 gpd of wastewater is pH treated before direct discharge to the local POTW. The pH treatment unit does not have secondary containment (5).

In addition to the operating pre-treatment systems, spent acids containing chromium were at one time pre-treated by means of a chrome-containing acid treatment system. This system was installed in 1987 and used for a few months before permitting difficulties made it no longer economical to operate (2,10).

The floor of the main building where pre-treatment systems are located is below land surface. Therefore, a potential spill would be contained within the building and not allowed to flow off site (2).

Hazardous wastes, consisting of spent acids and polypropylene bags containing chromium-contaminated precipitate, are currently stored

in 55-gallon drums in the hazardous waste accumulation area. These drums are situated on wooden slats over a concrete-bermed area. In addition, there are four 1,300-gallon tanks and one 470-gallon tank located in the hazardous waste accumulation area. The five tanks were installed in 1982 and used to store spent acid solutions for more than 90 days. The four 1,300-gallon tanks were used until 1984, and the one 470-gallon tank was used until 1987. C&M stopped storing waste on site for longer than 90 days when the company found it needed to file a Part B application in order to be issued a RCRA storage facility permit. The permit process was not economically feasible for such a small company (2,6,10).

## 5.2 GROUNDWATER

Little data exists regarding hydrogeology in the San Francisco area. However, the United States Geological Survey (USGS) is currently involved in a four-year study to characterize geology and groundwater potential in San Francisco. Although groundwater is not currently used in San Francisco for drinking water purposes, the San Francisco Water Department is exploring the possibility of augmenting surface water supplies from the Sierra Nevada with three million gallons of groundwater per day. Groundwater is currently used for irrigation and industrial purposes only (11).

There is a moderate potential for heavy metal contamination detected in on-site soils to reach groundwater. It appears that the water table in the proximity of the site is approximately 8 feet below ground surface (bgs) (3). However, the water quality of upper hydrogeological zones is probably poor due to historical industrial land use and potential saltwater intrusion. Potentially useful aquifers are believed to be in deeper water-bearing zones (11). The annual net precipitation in San Francisco is approximately 9.6 inches (12,13).

There is no population currently served by groundwater within four miles of the site. Additionally, municipal groundwater that may be used to augment current surface water supplies will likely come from areas west of the site near Golden Gate Park. As a result, the groundwater pathway does not appear to be a pathway of concern at this time (11).

## 5.3 SURFACE WATER

The potential for waste from C&M to migrate to surface water is low. The hazardous waste treatment systems and hazardous material storage areas are located in the main building, the floor of which is located below the surrounding land surface. The facility is designed so that a potential spill would be contained within the building. Additionally, the cyanide destruction system is located within a concrete-bermed, epoxy-lined area (2,5).

The hazardous waste accumulation area is paved. There is a concrete berm around the five acid tanks. These tanks are no longer in use and scheduled for removal. All hazardous waste is currently

collected in 55-gallon drums and stored in the hazardous waste accumulation area on wooden slats. There is a concrete berm around the drum storage area. Waste is stored on site for less than 90 days (2,3).

There is no documentation regarding past spills at the facility. Additionally, there is no available documentation regarding hazardous materials storage practices in 1959 when C&M began operations at the site. Prior to 1982, when the hazardous waste accumulation area was built, C&M discharged untreated waste directly to the POTW (2).

The closest surface water is a 0.75-mile-long channel leading to China Basin approximately 1,000 feet southeast of the site. China Basin is part of the San Francisco Bay which empties into the Pacific Ocean approximately 9 miles from the site (1). The 2-year, 24-hour rainfall in the vicinity of the site is approximately 2.5 inches (14). The site is located in a No Special Flood Hazard area. Although the area is not designated as a 100-year flood zone, floods may occur and structures could be damaged by local drainage problems (22).

San Francisco Bay is the largest estuary along California's coastline. It is an essential resting place, feeding area, and wintering ground for millions of birds, including several federally-endangered species, on the Pacific flyway between Canada and Mexico. Nearly 100 species of fish are also supported by the estuarine environment that includes marshlands, mudflats, salt production lands, and open water. Fish and wildlife of the bay are both a commercial and recreational resource (15). In the past it has been estimated that approximately 3,000,000 pounds of striped bass are taken from the bay every year for human consumption (16). China Basin is a spawning ground for Pacific herring. Herring eggs are commercially harvested from China Basin and other areas in the bay. The annual herring egg fishing quota for the entire bay is 10,000 tons (17).

Although C&M is located in the proximity of San Francisco Bay, hazardous wastes appear to be adequately contained on site and are therefore of low concern via the surface water pathway (1,2).

#### 5.4 AIR

There is a moderate potential for a release to air from current C&M facility operations. Plating and stripping solutions are contained in open barrels located inside the main building. FIT observed an ambient air hydrogen cyanide level of 3 parts per million (ppm) within 1 foot of a barrel containing cyanide stripping solution. The ambient air cyanide level dropped to 0 ppm approximately 3 feet from the barrel. No other cyanide levels were recorded throughout the rest of the property (2).

There is a low potential for a release to air from the hazardous waste accumulation area at the site. Hazardous wastes are stored in the accumulation area in sealed drums for less than 90 days (2).

The C&M site is located in a commercial/industrial area. FIT estimates there are approximately 100 people living within 0.25 miles of the site (2). The total population living within 4 miles of the site is approximately 470,000 people (18).

The C&M site is entirely paved and wastes appear to be adequately contained within storage drums. Therefore, there is a low potential for a release to air from the site (2).

#### 5.5 ON-SITE

There is a low potential for exposure to hazardous materials at the C&M site. Hazardous waste is stored in 55-gallon drums in the hazardous waste accumulation area which is fenced and padlocked during working and nonworking hours. Access to the waste accumulation area via the plating shop is locked during non-business hours. The entire site is paved which lessens the potential for exposure to lead contamination detected in on-site soils (2).

There are no on-site residents at the C&M site. The facility employs 11 people in addition to the four managing partners. The site is located in a commercial/industrial area. There are several restaurants and industrial shops, as well as a flower shop, located in the vicinity of the site. FIT estimates there are approximately 100 people living within 0.25 miles of the site (2). There are a total of approximately 23,000 people living within 1 mile of the site (18).

### 6. SUMMARY OF FIT INVESTIGATIVE ACTIVITIES

A site inspection of the C&M facility was conducted on Thursday, July 12, 1990 by FIT members Kimberly Hall and Karen Johnson. The inspection began with a meeting at 2:00 pm in the C&M office at 598 Sixth Street in San Francisco, California. Present at the meeting was Ray Mattman, a partner of C&M. The information obtained during the meeting included site history, waste management practices, and facility processes (2).

The meeting was followed by a facility tour. The locations of the treatment systems, the hazardous waste accumulation area, and the hazardous materials storage areas were observed during the visit and photographed (see Appendix B). Additionally, FIT observed and photodocumented waste containment measures, including berms, that C&M has taken to ensure that potential spills will not migrate off site (2).

## 7. EMERGENCY RESPONSE CONSIDERATIONS

The National Contingency Plan [40 CFR 300.415(b)(2)] authorizes the Environmental Protection Agency to consider emergency response actions at those sites which pose an imminent threat to human health or the environment.

There is no apparent need for emergency response at this time because all wastes appear to be adequately contained and the site is secured from public access.

## 8. SUMMARY OF HRS CONSIDERATIONS

C&M Plating Works (C&M), located in San Francisco, California, is a metal plating and finishing facility. The significant factors of the proposed revised Hazard Ranking System (rHRS) pertaining to the C&M site are:

- o A small apparent waste quantity;
- o No current use of groundwater for drinking water supplies;
- o A low potential for on-site exposure or a release to air from heavy metal contamination detected in on-site soils which are paved over; and
- o A low potential for a current release to surface water due to containment measures which are designed to restrict off-site migration of hazardous materials.

## 9. EPA RECOMMENDATION

	<u>Initial</u>	<u>Date</u>
No Further Action under CERCLA	<u>MWc</u>	<u>9/10/90</u>
High-Priority SSI under CERCLA	<u>          </u>	<u>          </u>
Medium-Priority SSI under CERCLA	<u>          </u>	<u>          </u>
Further Action under RCRA	<u>          </u>	<u>          </u>

Notes:

## REFERENCES

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2. Mattman, Ray, C&M Plating Works, and Kimberly Hall, Ecology and Environment, Inc.'s Field Investigation Team (E & E FIT), Site Reconnaissance Interview and Observations Report, July 12, 1990.
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4. Mattman, Ray, C&M Plating Works, to Charles A. White, California Department of Health Services (DHS), letter re: description and quantities of hazardous wastes generated, February 18, 1983.
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9. Lee, Tommy, San Francisco Department of Public Works, and Kimberly Hall, E & E FIT, telephone conversation, July 12, 1990.
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11. Hamlin, Scott, USGS, and Kimberly Hall, E & E FIT, telephone conversation, July 9, 1990.
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19. San Francisco County Assessor's Office and Kimberly Hall, E & E FIT, telephone conversation, August 22, 1990.
20. Low, Sonia, and William Brown, California Department of Health Services, and Kimberly Hall, E & E FIT, telephone conversation, August 23, 1990.
21. California Department of Health Services, Toxic Substances Control Program, Update to the 1989 Expenditure Plan for the Hazardous Substances Cleanup Bond Act of 1984, January 10, 1990.
22. Lera, Janice, U.S. Army Corps of Engineers, and Kimberly Hall, E & E FIT, telephone conversation, August 24, 1990.

## **APPENDIX A: CONTACT LOG AND CONTACT REPORTS**

### CONTACT LOG

Facility Name: C & M Plating Works  
Facility ID: CAD009204736

Name	Affiliation	Phone #	Date	Information
Bob Tasto	CA Department of Fish & Game	415-688-6360	5/30/90	See Contact Report.
Richard McMurtry	RWQCB	415-464-1255	7/2/90	No information.
Bill Brown	DHS - Surveillance and Enforcement	415-540-2122	7/2/90	DOHS is in the process of issuing C & M a Corrective Action Order (CAO) through the Attorney General's Office due to operating treatment systems without a permit.
Sonia Low	DHS - Permitting	415-540-2122	7/2/90	Made appointment to look at files for Tuesday, July 3 at 1:00 p.m.
Scott Hamlin	USGS	916-978-4648	7/9/90	See Contact Report.
Tommy Lee	SF City and County Department of Public Works - Industrial Waste Division	415-558-5145	7/12/90	See Contact Report.
Stephanie Cushing	SF Health Department	415-554-2727	7/12/90	See Contact Report.
Ray Mattman	C & M Plating Works	415-861-1556	7/12/90	See Site Reconnaissance interview and observations report.
	San Francisco County Assessor's office	415-554-5531	8/22/90	There is no record of the former operations at 698 Sixth Street, prior to 1959.

CONTACT LOG (Cont.)

Facility Name: C & M Plating Works  
Facility ID: CAD009204736

Name	Affiliation	Phone #	Date	Information
John Tanaka	San Francisco Office of Business and Federal Tax	415-554-9459	8/22/90	His office does not have records earlier than 1969.
Sonia Low William Brown	DHS	415-540-3889	8/23/90	See Contact Report.
Janice Lera	U.S. Army Corps of Engineers	415-744-3359	8/24/90	See Contact Report.

# CONTACT REPORT

<b>AGENCY/AFFILIATION:</b> California Department of Fish & Game		
<b>DEPARTMENT:</b>		
<b>ADDRESS/CITY:</b> Menlo Park		
<b>COUNTY/STATE/ZIP:</b> San Mateo County, California		
<b>CONTACT(S)</b>	<b>TITLE</b>	<b>PHONE</b>
1. Bob Tasto		415-688-6360
2.		
<b>E &amp; E PERSON MAKING CONTACT:</b> Kate Dragolovich		<b>DATE:</b> 5/30/90
<b>SUBJECT:</b> Commercial fisheries in San Francisco Bay		
<b>SITE NAME:</b> C & M Plating Works		<b>EPA ID#:</b> CAD009204736

Commercial fishing in San Francisco Bay primarily revolves around Pacific herring. The eggs are sent to Japan for consumption. The main fisheries for herring eggs are in the central and north bay (i.e. China Basin and Treasure Island) where the thickest spawning areas are located. The annual herring egg fishing quota, or the maximum amount that commercial fisherman are allowed to catch in the entire San Francisco Bay, is 10,000 tons.

## CONTACT REPORT

<b>AGENCY/AFFILIATION:</b> United States Geological Survey		
<b>DEPARTMENT:</b> Water Resources Division		
<b>ADDRESS/CITY:</b> Federal Building, Room W-2234, 2800 Cottage Way, Sacramento		
<b>COUNTY/STATE/ZIP:</b> CA 95825		
<b>CONTACT(S)</b>	<b>TITLE</b>	<b>PHONE</b>
1. Scott Hamlin		916-978-4648
2.		
<b>E &amp; E PERSON MAKING CONTACT:</b> Kimberly Hall		<b>DATE:</b> 7/9/90
<b>SUBJECT:</b> San Francisco Groundwater Study		
<b>SITE NAME:</b> C & M Plating Works		<b>EPA ID#:</b> CAD009204736

USGS is involved in a 4-year study to characterize groundwater and soils in San Francisco. The city wishes to augment surface water supplies from the Sierra Nevada with 3 million gallons of water per day by tapping water-bearing zones underlying San Francisco.

The west side of the basin has been determined to be the most promising area for groundwater development (Golden Gate Park to Lake Merced, west of Mt. Davidson). Some monitoring wells have been installed in the Presidio and downtown San Francisco.

The closest monitoring well to the site that USGS has data for is located at 5th and Mission Streets. The well is 50 feet deep. A few years ago, when the well was last sounded, the water level was measured at 42 feet below ground surface (bgs).

A well that has been monitored more recently is located at Oak and Market Streets. This well is in the basement of the International Center, approximately 20 feet bgs. The top of the well casing is 26.61 feet above sea level. Water levels measured from the top of the well casing over the last two years have been 4 feet (October 1988), 4.47 (November 1988), 4.74 feet (March 1989), 5.58 feet (October 1989), and 6.25 feet (February 1990).

Golden Gate Park currently operates 7 wells which are used solely for irrigation. There are no wells in San Francisco that are presently used for drinking water purposes. The wells that are most likely to be tapped if groundwater is incorporated in the municipal drinking water

system are located in the "Sunset well system" around Golden Gate Park. There are no well logs available for the two wells located near the site.

Contact Norm Lougee with the San Francisco Water Department for more information 415-923-2467.

# SITE RECONNAISSANCE INTERVIEW AND OBSERVATIONS REPORT

Ecology and Environment, Inc.		
Field Investigation Team (FIT)		
160 Spear Street, Suite 1400		
San Francisco, California 94105		
(415) 777-2811		
<b>E &amp; E PERSON(S) CONDUCTING INTERVIEW AND MAKING OBSERVATIONS:</b>		
Kimberly Hall and Karen Johnson		
<b>FACILITY REPRESENTATIVE(S):</b>	<b>TITLE:</b>	<b>PHONE:</b>
Ray Mattman		415-861-1556
<b>SITE NAME:</b> C&M Plating Works		<b>DATE:</b> 7/12/90
<b>CITY/STATE:</b> San Francisco, CA		<b>EPA ID#:</b> CAD009204736

## The following information was obtained during the interview:

C&M Plating Works (C&M) is currently undergoing closure procedures to change their permit status from hazardous waste storage facility to hazardous waste generator where waste is stored on site for less than 90 days. As part of this process, DOHS has required C&M to take soil samples from the storage area. Sample analyses have indicated high levels of lead in on-site soils. As a result, DOHS is requiring additional sampling. C&M proposes to install two shallow wells and drill ten borings. The hazardous waste permit expired September 30, 1988, but the site is still not considered closed.

C&M does not use lead in their process although they do have some lead containers on the facility. The site is located on bay fill material; therefore, lead contamination may have been introduced from another location. In addition, lead contamination may be a result of activities at the site prior to 1959 when C&M began operations at the site. Mr. Mattman recalls a used equipment business at the site. This business appeared to be primarily involved in buying and selling old equipment which they would recondition. The company may have dismantled batteries in order to recycle the lead.

The hazardous waste storage area was built in 1982. Prior to this time all waste, containing heavy metals and acids, was neutralized and discharged directly to the publicly-owned treatment works (POTW).

The process to treat chromium containing acid waste could not be issued a variance but required a Part B permit. As a result, C&M elected to stop treating this waste and to return to the process of having it hauled off site. The associated filter press is no longer in use either. The three remaining wastewater treatment processes; the cyanide destruct system, the chromium treatment system, and the pH treatment system, are still in use awaiting the Permit by Rule decision.

**Permits:**

DOHS	Hazardous Waste Facility Permit (closure)
SF County Health Department	Hazardous Materials Storage Permit
SF Department of Public Works	Discharge to POTW
Bay Area Air Quality Management District	Decorative Chrome Plating Facility

C&M stopped using cadmium around 1984 due to the hazardous nature of the metal.

There are 11 people working at the facility in addition to the four managing partners.

**The following observations were made during the site reconnaissance visit:**

The floor of the main building is below land surface. This is the building where hazardous materials are stored, and the three active treatment systems are located. Any spill will be contained within the building. Additionally, the chrome-treatment system is contained within a concrete berm which has been treated with a tar-like substance to make it water-resistant.

The site is located in what is primarily a commercial/industrial area. There is a restaurant located directly across Sixth Street from the site. There are a few residential homes located less than 0.25 miles west of the site which FIT estimates to house approximately 100 people.

C&M uses a cyanide stripping solution to clean surfaces before plating. This solution is contained in an open plastic barrel. Cyanide waste drains directly to the cyanide destruction system. FIT observed a reading of 3 parts per million (ppm) using a cyanide monotox directly adjacent to the barrel. The reading returned to background (0 ppm) when the cyanide monotox was moved approximately 4 feet from the barrel. No other readings were recorded over the rest of the site.

The hazardous waste accumulation area is accessed through a door on the north side of the metal building. Access to the storage area is restricted by a high metal fence and a gate which is locked at all

times, even during business hours. The five acid tanks, which were used for a short time to store acid waste, are scheduled for removal within the next week. At the time of the inspection there were four 55-gallon drums stored within a concrete-bermed section of the storage area. C&M currently uses 55-gallon drums to store waste. Waste is stored on site less than 90 days.

# CONTACT REPORT

<b>AGENCY/AFFILIATION:</b> San Francisco Department of Public Works		
<b>DEPARTMENT:</b> Industrial Waste Division		
<b>ADDRESS/CITY:</b> 750 Phelps Street, San Francisco		
<b>COUNTY/STATE/ZIP:</b> San Francisco County, CA		
<b>CONTACT(S)</b>	<b>TITLE</b>	<b>PHONE</b>
1. Tommy Lee		415-558-5145
2.		
<b>E &amp; E PERSON MAKING CONTACT:</b> Kimberly Hall		<b>DATE:</b> 7/12/90
<b>SUBJECT:</b> Permits		
<b>SITE NAME:</b> C & M Plating Works		<b>EPA ID#:</b> CAD009204736

San Francisco Department of Public Works (SFDPW) samples C & M Plating Works (C&M) waste stream 3 to 4 times every year. C&M was issued a permit for this discharge in 1976 which did not have an expiration date. However, SFDPW is starting to put expiration dates on new and old permits. C & M's permit will likely need to be renewed in three months.

C&M has had very few documented permit violations. At times, unpermitted levels of metals such as chromium have been detected in the facility's waste stream, but these violations have always been corrected in a timely manner. C&M is currently in compliance with federal and state regulations which are stipulated in their permit.

There have been no documented spills from the site. Mr. Lee did not know what C&M did with their waste prior to the construction of the waste storage area in 1982.

# CONTACT REPORT

<b>AGENCY/AFFILIATION:</b> San Francisco County Health Department		
<b>DEPARTMENT:</b> Hazardous Materials		
<b>ADDRESS/CITY:</b> 101 Grove Street, San Francisco		
<b>COUNTY/STATE/ZIP:</b> San Francisco, CA		
<b>CONTACT(S)</b>	<b>TITLE</b>	<b>PHONE</b>
1. Stephanie Cushing		415-554-2727
2.		
<b>E &amp; E PERSON MAKING CONTACT:</b> Kimberly Hall		<b>DATE:</b> 7/12/90
<b>SUBJECT:</b> Permits		
<b>SITE NAME:</b> C & M Plating Works		<b>EPA ID#:</b> CAD009204736

C & M Plating Works was first issued a permit in 1988 to store hazardous materials on site. This permit is renewed every year.

The county defers to the state in all remediation efforts; therefore, the DOHS is the lead in characterizing the extent and origin of soil contamination (lead and other heavy metals) at C & M Plating Works.

### CONTACT REPORT

<b>AGENCY/AFFILIATION:</b> California Department of Health Services		
<b>DEPARTMENT:</b> Toxic Substances Control Division		
<b>ADDRESS/CITY:</b> 700 Heinz Avenue, Building F, Berkeley		
<b>COUNTY/STATE/ZIP:</b> Contra Costa County, CA 94710		
<b>CONTACT(S)</b>	<b>TITLE</b>	<b>PHONE</b>
1. Sonia Low	Permitting	
2. William Brown	Surveillance	415-540-3889
<b>E &amp; E PERSON MAKING CONTACT:</b> Kimberly Hall		<b>DATE:</b> 8/23/90
<b>SUBJECT:</b> Permitting		
<b>SITE NAME:</b> C & M Plating Works		<b>EPA ID#:</b> CAD009204736

The reason that the variance was denied for the chrome-containing spent acid waste treatment system is unclear. Dick Burger was the person who worked on the variance application and he is on medical leave.

The remaining treatment systems; the cyanide destruction, chrome separation, and pH treatment systems, are still in use at C&M. These systems are eligible for California Permit by Rule status as they are non-RCRA treatments.

### CONTACT REPORT

<b>AGENCY/AFFILIATION:</b> U.S. Army Corps of Engineers		
<b>DEPARTMENT:</b>		
<b>ADDRESS/CITY:</b> 211 Main Street, 9th Floor, San Francisco		
<b>COUNTY/STATE/ZIP:</b> San Francisco County, CA 94105		
<b>CONTACT(S)</b>	<b>TITLE</b>	<b>PHONE</b>
1. Janice Lera		415-744-3359
2.		
<b>E &amp; E PERSON MAKING CONTACT:</b> Kimberly Hall		<b>DATE:</b> 8/24/90
<b>SUBJECT:</b> Flood zones		
<b>SITE NAME:</b> C & M Plating Works		<b>EPA ID#:</b> CAD009204736

On a 1974 National Flood Insurance Program map, C & M Plating Works is located in what is designated a No Special Flood Hazard area. This means that "[a] flood map for the community has not been published. Although the area may not be subject to 100-year floods, floods of greater magnitude may occur there. In addition, certain structures may be damaged as a result of local drainage problems".

Currently, San Francisco has been removed from the National Flood Insurance Program. This might mean that there is no flood hazard in the area.

## **APPENDIX B: PHOTODOCUMENTATION**

FIELD PHOTOGRAPHY LOG SHEET

DATE: 7/12/90

TIME: 2:52 PM

DIRECTION:

south

WEATHER: sunny

PHOTOGRAPHED BY:

Kimberly Hall

DESCRIPTION:

Alley between hazardous waste accumulation area and metal plating shop. Notice fence and padlocked gate. Notice open boring hole next to drum.



DATE: 7/12/90

TIME 2:59 PM

DIRECTION:

south

WEATHER: sunny

PHOTOGRAPHED BY:

Kimberly Hall

DESCRIPTION:

Notice slope from the street down to floor of metal plating shop. A potential spill will be contained within the building.



kh/c&mpw/fpls

FIELD PHOTOGRAPHY LOG SHEET

DATE: 7/12/90

TIME: 2:49 PM

DIRECTION:

west

WEATHER: sunny

PHOTOGRAPHED BY:

Kimberly Hall

DESCRIPTION:

Two of the five acid tanks  
which are no longer used  
and scheduled for removal.  
Located in hazardous waste  
accumulation area. Notice  
part of berm has been removed.



DATE: 7/12/90

TIME 2:47 PM

DIRECTION:

west

WEATHER: sunny

PHOTOGRAPHED BY:

Kimberly Hall

DESCRIPTION:

Cyanide and sulfur stripping baths. FIT observed a cyanide level of 3 ppm  
approximately 1 foot from the cyanide bath using a cyanide monotox  
instrument.



kh/c&mpw/fpls

FIELD PHOTOGRAPHY LOG SHEET

DATE: 7/12/90

TIME: 2:48 PM

DIRECTION:

east

WEATHER: sunny

PHOTOGRAPHED BY:

Kimberly Hall

DESCRIPTION:

Hazardous waste  
accumulation area.  
Four 55-gallon  
drums containing  
hazardous waste.  
Notice berm.



DATE: 7/12/90

TIME 2:50 PM

DIRECTION:

north

WEATHER: sunny

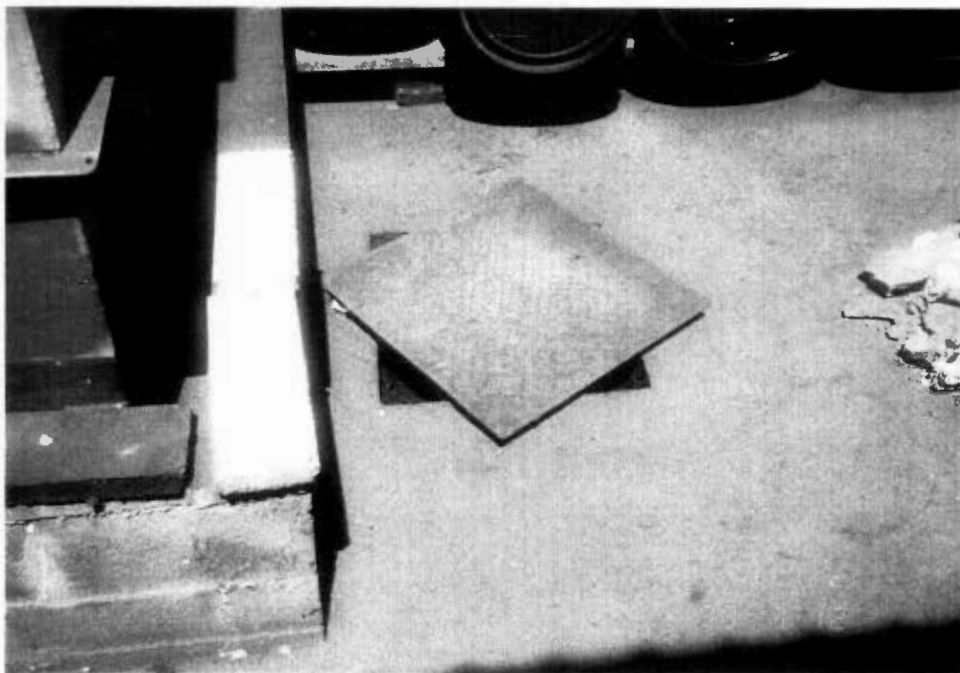
PHOTOGRAPHED BY:

Kimberly Hall

DESCRIPTION:

Rainwater collection depression. There is no drain. This depression is  
pumped out periodically.

kh/c&mpw/fpls



FIELD PHOTOGRAPHY LOG SHEET

DATE: 7/12/90

TIME: 2:54 PM

DIRECTION:

west

WEATHER: sunny

PHOTOGRAPHED BY:

Kimberly Hall

DESCRIPTION:



Hazardous material storage area for oxidizers. Notice metal barrier separating oxidizers from corrosives.

DATE: 7/12/90

TIME 2:56 PM

DIRECTION:

north

WEATHER: sunny

PHOTOGRAPHED BY:

Kimberly Hall

DESCRIPTION:



Hazardous material storage area for acids.

kh/c&mpw/fpls

FIELD PHOTOGRAPHY LOG SHEET

DATE: 7/12/90

TIME: 2:58 PM

DIRECTION:

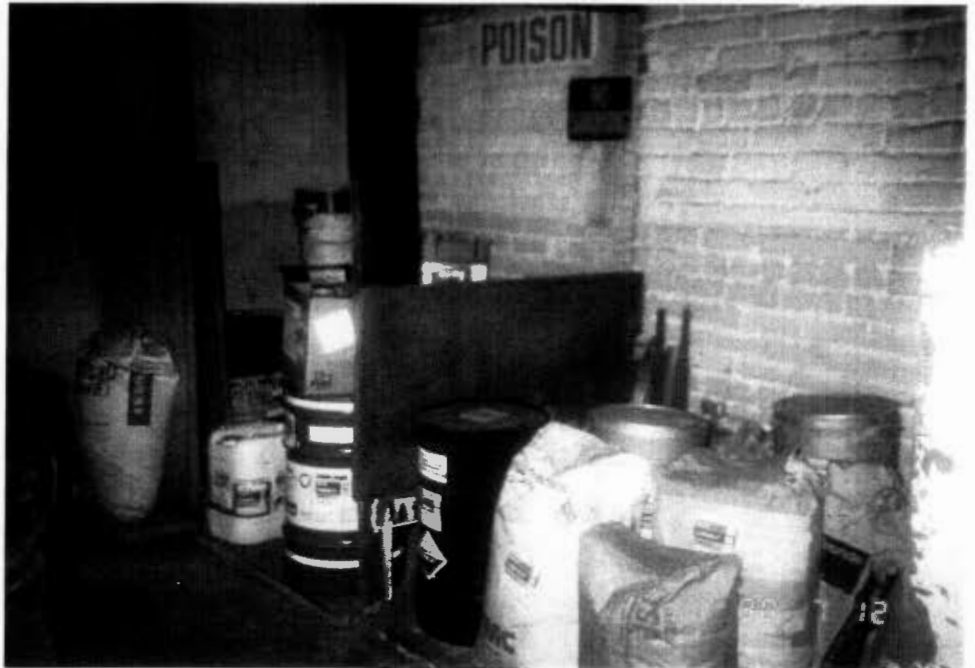
southeast

WEATHER: sunny

PHOTOGRAPHED BY:

Kimberly Hall

DESCRIPTION:



Hazardous material storage areas for cyanide and caustics separated by metal barrier.

DATE: 7/12/90

TIME 2:53 PM

DIRECTION:

east

WEATHER: sunny

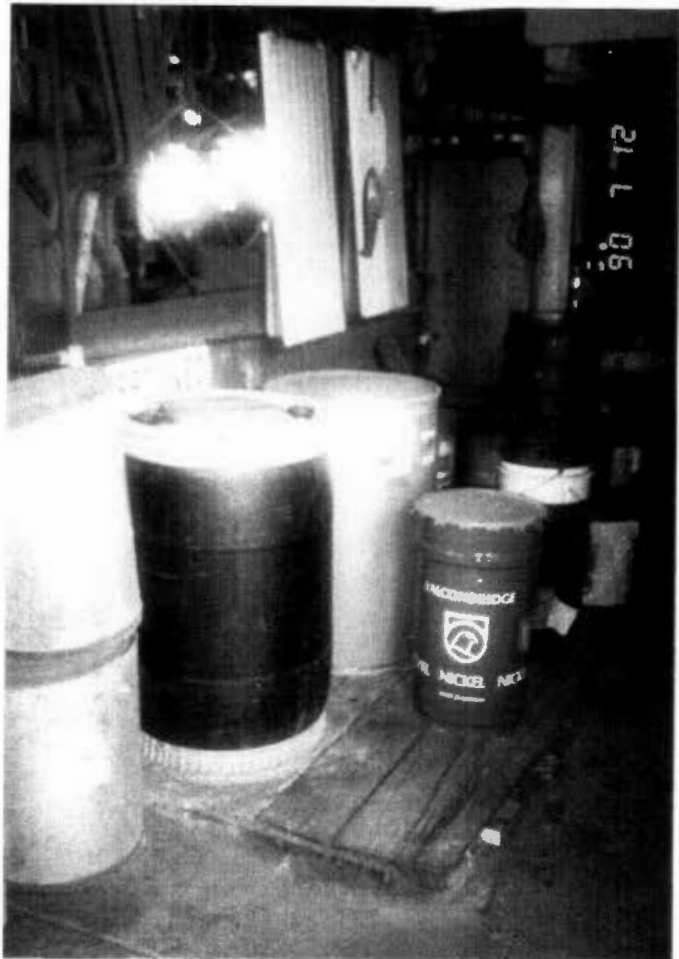
PHOTOGRAPHED BY:

Kimberly Hall

DESCRIPTION:

Hazardous material storage area for corrosives.

kh/c&mpw/fpls



FIELD PHOTOGRAPHY LOG SHEET

DATE: 7/12/90

TIME: 2:37 PM

DIRECTION:

north

WEATHER: sunny

PHOTOGRAPHED BY:

Kimberly Hall

DESCRIPTION:

Chromium destruct  
treatment system  
and accumulation baths.



DATE: 7/12/90

TIME 2:45 PM

DIRECTION:

west southwest

WEATHER: sunny

PHOTOGRAPHED BY:

Kimberly Hall

DESCRIPTION:

Discharge connection from the pH treatment system to the publically-owned  
treatment works (POTW).



kh/c&mpw/fpls

FIELD PHOTOGRAPHY LOG SHEET

DATE: 7/12/90

TIME: 2:20

DIRECTION:

southeast

WEATHER: sunny

PHOTOGRAPHED BY:

Kimberly Hall

DESCRIPTION:

Chrome-containing mixed  
acid treatment system.  
This system is not  
currently in use.



DATE: 7/12/90

TIME 2:22 PM

DIRECTION:

south

WEATHER: sunny

PHOTOGRAPHED BY:

Kimberly Hall

DESCRIPTION:

Cyanide destruct treatment system. Notice high concret berm.

kh/c&mpw/fpls

